

REMARKS

Reconsideration and allowance are requested. Claims 22, 24, 25, 27 - 31 and 34 - 53 are currently pending in this application. None of the above amendments are made for patentability. The claim amendments either broaden the claims or are made to correct typographical errors, as in claim 40.

Rejection of Claims 22, 24, 25, 27 - 30 and 44-45 Under Section 103

The Examiner rejects claims 22, 24, 25, 27 - 30 and 44-45 under Section 103 as being unpatentable over U.S. Patent No. 5,802,465 to Hamalainen et al. ("Hamalainen et al.") in view of U.S. Patent No. 5,267,261 to Blakeney et al. ("Blakeney et al.") and further in view of U.S. Patent No. 5,963,848 to D'Avello ("D'Avello"). Applicants respectfully traverse these rejections and submit that the pending claims are patentable over the prior art of record.

Initially, Applicants traverse the combination of Hamalainen et al. with Blakeney et al. To establish a *prima facie* case of obviousness using two or more references, the Examiner must meet three criteria. First, there must be some motivation or suggestion, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to combine the references. Second, there must be a reasonable expectation of success, and finally, the prior art references must teach or suggest all the claim limitations. The Examiner bears the initial burden of providing some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as

to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." MPEP 2142.

Applicants submit that although the Examiner has failed to carry his burden of establishing a prima facie case of obviousness. The only articulation of any suggestion or motivation to combine Hamalainen et al. with Blakeney et al. is that they are "in the same field of endeavor." Upon further investigation, however, Applicants submit that the differences in the subject matter and focus of Hamalainen et al. compared to Blakeney et al. can only lead to a conclusion that an artisan would have no motivation to combine their teachings. Further, specific statements within the references themselves, rather than providing motivation to combine their teachings, actually urge away from any combination.

Hamalainen et al. teaches concepts for bidirectional transmission of packet data in a cellular system associated with a mobile switching center. (Abstract). The only cellular protocol mentioned by Hamalainen et al. is the Global System for Mobile Communication (GSM) protocol. All the prior art cited by Hamalainen et al. (note the "other publications" listing) are GSM-related references. Although Hamalainen et al. mention the EIA/TIA (Electronic Industries Association/Telecommunication Industry Association) standards, of which CDMA is one, when the detailed description of the invention begins at col. 3, line 63, it is clear that the present invention is limited to GSM.

There are several reasons that it is clear that the disclosure of Hamalainen et al. is only related to the GSM standard. As explained in col. 3, line 63 - col. 4, line 13, they discuss the physical channel of a mobile station communicating with a base station as consisting of time slots where the respective time slots constitute a logical channel. The use of time slots in transmission channels in cellular systems is

according to the time division multiple access (TDMA) standard. GSM utilizes a combination of the TDMA concepts and frequency division multiple access (FDMA). See, e.g., GSM Networks: Protocols, Terminology, and Implementation, Artech House Publishers 1999, Chapter 7. The figures are explained by Hamalainen et al. as showing a GSM network. See, e.g., FIG. 1B, Col. 9, lines 53-54. Furthermore, throughout the specification are numerous references to the GSM standard in the description of the Hamalainen et al. invention.

In sum, it would be very clear to an artisan in reviewing the Hamalainen et al. disclosure that they are focused on data transmission according to the GSM standard. This is vitally important in the prima facie obviousness case inasmuch as Blakeney et al. disclose a CDMA soft handoff invention. This becomes clear in both the title and the first line of the Abstract. The code division multiple access (CDMA) standard is well-known to differ dramatically from the TDMA/FDMA (GSM) standards. In the CDMA standard, each user's narrowband signal is spread over a wider bandwidth. Each signal is spread by a different wideband code, and each of the codes is orthogonal to each other. All the spread-spectrum wideband signals of different users are added together to form a composite signal which is transmitted over the air in the same frequency band. Rather than receiving each user's signal according to individual time slots (TDMA) or individual frequency bands (FDMA), a CDMA signal distinguishes users according to the user's wideband code applied to spread the user's signal.

Blakeney et al. even teaches away from any combination of CDMA concepts with TDMA and FDMA concepts wherein they state "CDMA has significant advantages over these other modulation techniques." Col. 1, lines 24-30. In this regard, Blakeney et al. explain that the CDMA approach differs from and is an

improvement over the TDMA/FDMA protocols. In this manner, with regards to the legal determination of whether it is appropriate to combine references, Applicants submit that Blakeney et al. explicitly distance themselves from the GSM standard (based on a combination of TDMA and FDMA) and thus remove any motivation or suggestion to an artisan to combine Blakeney et al. with Hamalainen et al.

For these reasons alone, Applicant submits that the claims are patentable over the prior art of record inasmuch as they cannot be combined to identify each limitation recited in the claims. Applicants, however, further address the claims below.

We now turn to claim 22. Claim 22 recites a communications system comprising a plurality of base stations, the base stations configured to receive a list of preferred traffic channels generated by the wireless station based on detected levels of the pilot frequency signals at the wireless station. The Examiner concedes that Hamalainen et al. fail to teach this limitation but she asserts states that Blakeney et al. teach this limitation. Applicants note that the Examiner eliminates several of this claim's limitations in her characterization on page 3 of the Office Action. She states that Blakeney et al. teach "generating a list of preferred traffic channels based on detected levels of the pilot frequency signals and transmitting the list to the base station." Claim 22, however, requires that the base station be configured to receive the list of preferred traffic channels generated by the wireless station. Further, Applicants note that the Examiner only briefly states that Blakeney et al. discloses "(system resources)" which is allegedly to disclose this limitation of claim 22. There is no citation to any figure or portion of text of Blakeney et al. to support the assertion.

Applicants have searched Blakeney et al. and found no disclosure of the concept of the wireless station generating a list of preferred traffic channels and the base station being configured to receive this list. Therefore, even if it were appropriate to combine Hamalainen et al. with Blakeney et al., the combination would still fail to teach each limitation of claim 22. For the above reasons, Applicants submit that claim 22 is patentable and in condition for allowance.

The Examiner further cites D'Avello asserting that he discloses a base station configured to receive a list of preferred traffic channels based on pilot frequency signals. Applicant traverses this interpretation of D'Avello and respectfully submits that he fails to disclose this limitation of claim 22. D'Avello teaches a mobile unit providing channel quality information based on RSSI measurement or bit error rate. D'Avello fails to discuss the use of pilot frequency signals from the base station. As explained on pages 15-16 of the current patent application, the pilot frequency signal is transmitted in a pilot signal frequency band using a FFT technique for detecting pilot signals that respectively correspond to channels currently being used for downlink transmission. The frequency used for pilot signals differs from the data channels as is shown in FIG. 3 of the present application. D'Avello only teaches that the mobile unit provides channel quality information based upon RSSI measurement from the mobile unit, or bit error rate. Inasmuch as D'Avello is silent with regards to the base station transmission of a pilot signal in a pilot signal frequency band, he also fails to disclose the wireless station detecting levels of the pilot frequency signals and sending that list to the base station. As mentioned above, FIG. 3 shows that detecting the pilot signals involves detecting information in a frequency band that differs from the RSSI measurements or bit error rate as taught by D'Avello. Accordingly,

D'Avello, in combination with Hamalainen et al. and Blakeney et al., still fail to teach each limitation of claim 22.

Claims 24, 25, 27 and 28 - 31 each depend from claim 22 and recite further limitations therefrom. Applicants apply the above arguments and submit that these claims are patentable as well inasmuch as their parent claim is patentable.

On page 3 of the Office Action, the Examiner notes that regarding claims 44 and 45 that Blakeney et al. disclose the mobile station assisted handoff where she asserts that Blakeney et al. discuss generating a list of preferred traffic channel resources based on detected levels of the pilot frequency signals and transmitting the list of the base station. Applicants note that claims 44 and 45 are dependent claims that recite a base station according to claim 43, wherein the wireless station is a mobile station or a fixed station. Applicants are unsure regarding whether the Examiner intended to make these arguments to reject claims 44 and 45. Clarification is respectfully requested. This is the only argument against the patentability of claims 44 and 45.

Rejection of Claims 34 - 39 Under Section 103

The Examiner rejects claims 34 - 39 as being unpatentable over Hamalainen et al. in view of U.S. Patent No. 5,497,505 to Koohgoli et al. ("Koohgoli et al."). Applicant respectfully traverses this rejection and submits that these claims are patentable.

Claim 34 is easily distinguishable from the combination of references. The Examiner concedes that Hamalainen et al. fail to disclose receiving a list of preferred traffic channels at the base station and a pilot frequency signal scanner for scanning a frequency in response to the paging message. However, when the Examiner asserts

that Koohgoli et al. can be drawn upon to disclose these limitations, the Examiner fails to reference the limitation that the wireless station transmits a message indicating available downlink channels for transmission of the data packet. In each citation by the Examiner from Koohgoli et al., the base station receives a list of traffic channels but the list is never transmitted from the wireless station. Clearly in Col. 3, lines 24-30 of Koohgoli et al., the base station receives a list of available traffic channels, and then sends a message to the subscriber terminal notifying the terminal of which channels are useable. Then subscriber terminal then selects a channel to use. Col. 3, lines 24 - 45. This approach clearly differs from the claimed invention in claim 34 which requires the wireless terminal to transmit a message indicating available downlink channels for transmission of the data packet.

Accordingly, Applicants respectfully submit that the cited references fail to teach each limitation of claim 34 and therefore this claim is patentable and in condition for allowance.

Claims 35 - 39 each depend from claim 34 and recite further limitations therefrom. Accordingly, Applicants submit that for the same reasons set forth above that these claims are patentable as well.

Rejection of Claims 40 - 42 and 46 - 52 Under Section 103

The Examiner rejects claims 40 - 42 and 46 - 52 as being unpatentable over Hamalainen et al., Blakeney et al. and further in view of U.S. Patent No. 5,507,007 to Gunmar ("Gunmar"). Applicants traverse this rejection and submit that these claims are patentable.

Applicants incorporate the above arguments regarding why there is no motivation or suggestion to combine Hamalainen et al. (GSM approach) with

Blakeney et al. (CDMA approach). For this reason alone, Applicants submit that these claims are patentable. However, further arguments are presented.

When the Examiner concedes that Hamalainen et al. and Blakeney et al. fail to teach each limitation of claim 40, the Examiner mischaracterizes the invention. The Examiner states that the combination fails to teach “generating of a preferred traffic channel priority order list for the wireless station at the base station...” However, claim 40 requires the base station to include a receiver for receiving a list of preferred traffic channels from the wireless station. (Applicants have corrected the typographical error in claim 40.) Accordingly, when Gunmar is combined with the other references, even in combination the references fail to teach a base station that receives a list of preferred channels from the wireless station for downlink transmission of the data packet. Gunmar specifically notes that its priority list is not generated by wireless stations: “In means provided centrally, for instance a computer, the allocation of the required number of channels per cell can be made dependent of the traffic need in every moment...” Col. 2, lines 7-9. Clearly Gunmar does not contemplate the wireless station generating a list of preferred channels.


Accordingly, Applicants submit that claim 40 is patentable and in condition for allowance. Similarly, dependent claims 41 - 43 and 46 - 53, which recite further limitations from claim 40 (and claims 44-45 as well), are patentable and in condition for allowance.

CONCLUSION

Having addressed the rejection of claims 22, 24, 25, 27 - 31 and 34 - 53
Applicants respectfully submit that the subject application is in condition for
allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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